

# PC SYNC PROFESSIONAL SOFTWARE USER MANUAL



**Model: DWL3000XY**



REVISION 2.00

**[www.digipas.com](http://www.digipas.com)**

---

*Note: Contents in this instruction manual is continuously updated, please check Digi-Pas website for latest version.*

# **INTELLECTUAL PROPERTY**

This manual contains propriety information, which is protected by copyrights. All rights are reserved. No part of this manual may be photocopied, reproduced, redistributed or translated to another language without prior written consent of JSB TECH Company.

The information in this manual was correct at the time of printing, stored in CD or uploaded in the Company website. However, JSB TECH will continue to improve products and reserves the rights to change specification and maintenance procedures at any time without prior notice.

The PC Sync software uses the National Instruments™ Measurement Studio\* for certain user interface tools and measurement applications.

Digi-Pas® Products were manufactured under ISO9001 & ISO14001 standards, tested to comply by the followings certification bodies:



Digi-Pas®, the Digi-Pas® logo are registered trademarks of JSB TECH Pte Ltd. © 2013. All rights reserved.

\*National Instrument™ logo is the trademarks of National Instruments Corporation. Microsoft is the registered trademarks of Microsoft Corporation.

# **TABLE OF CONTENT**

## **CHAPTER 1: GENERAL OVERVIEW**

- Interface Overview
- Software Features

## **CHAPTER 2: SYSTEM REQUIREMENTS**

## **CHAPTER 3: GETTING STARTED**

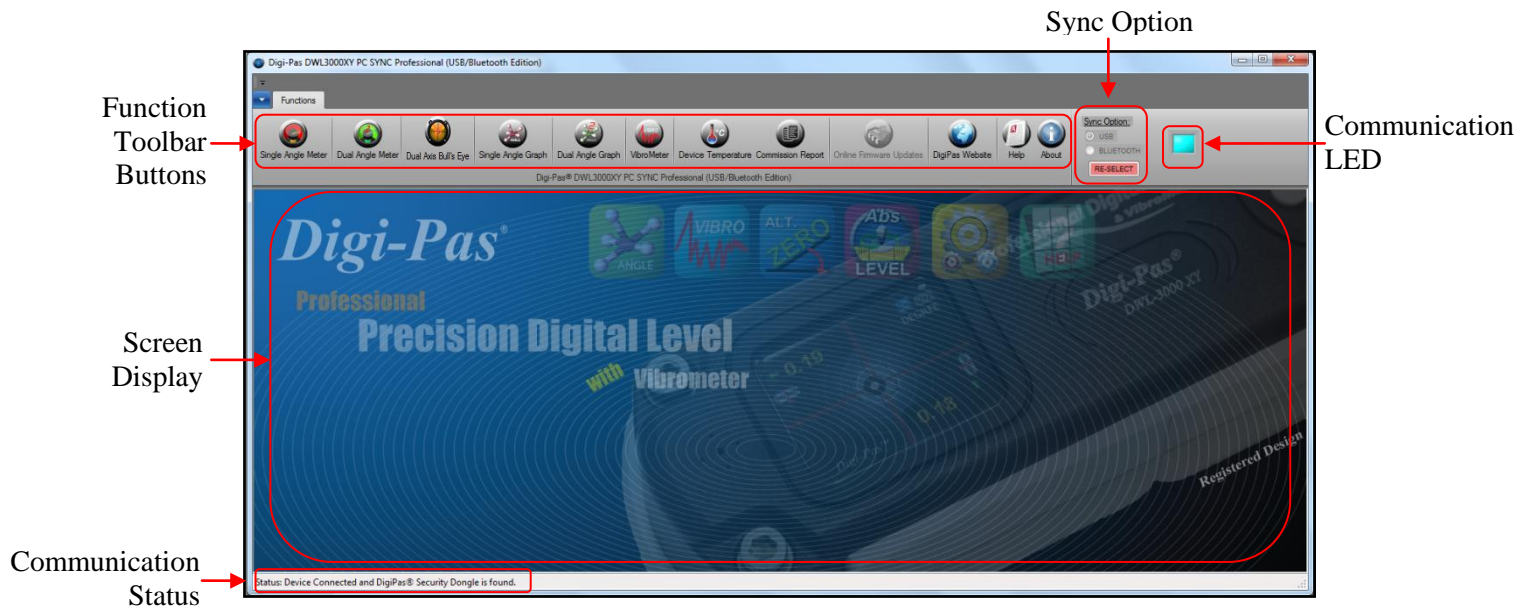
- Installation of DWL3000XY PC Sync
- Synchronization with USB
- Synchronization with Bluetooth

## **CHAPTER 4: FEATURES INTERFACE AND SETTING**

- Single Angle Meter
- Dual Angle Meter
- Dual Axis Bull's Eye
- Single Angle Graph
- Dual Angle Graph
- VibroMeter




# CHAPTER 1: GENERAL OVERVIEW









## Interface Overview



Sync Option	To select the synchronization mode (via USB or Bluetooth)
Communication Status	To show the communication status between PC, device and DigiPas® Security Dongle.
Communication LED	To indicate the device is connected to the software
Function Toolbar	Contains buttons with different functions.
Screen Display	To display the graphic user interface.

## Software Features

 <p>Single Angle Meter</p>	<p><b>Single Angle Meter</b></p> <p>This feature allows user to view single-axis angle/levelling measurement in numerical and graphical display i.e. degree, mm/M &amp; In/Ft units concurrently on PC monitor via USB or wireless Bluetooth connectivity.</p>
 <p>Dual Angle Meter</p>	<p><b>Dual Angle Meter</b></p> <p>This feature allows user to view dual-axis angle/levelling measurement simultaneously in numerical and graphical in degree, mm/M &amp; In/Ft units concurrently on PC monitor via USB or wireless Bluetooth connectivity.</p>
 <p>Dual Axis Bull's Eye</p>	<p><b>Dual Axis Bull's Eye</b></p> <p>This feature allows user to view and record dual-axis angle/levelling measurement simultaneously in graphical "Bull's eye", line graphs, Numeric format on degree, mm/M &amp; In/Ft units. User may define several parameters for data capturing. The numerical data can be saved in Excel format for further analysis.</p>

	<p><b>Single Angle Graph</b></p> <p>This feature allows user to view, track and record real-time single-axis angle/levelling measurement readings in numerical and graphical forms (i.e. degree, mm/M &amp; In/Ft). User may define parameters for numerical data capturing.</p>
	<p><b>Dual Angle Graph</b></p> <p>This feature allows user to view, track and record real-time 2-axis angle measurement (i.e. a plane or set of coordinates) angle/levelling measurement readings in numerical and graphical forms (i.e. degree, mm/M &amp; In/Ft). User may define parameters for numerical data capturing.</p>
	<p><b>VibroMeter</b></p> <p>This feature allows user to monitor low frequency vibration patterns in line graph. User may define several parameters for capturing vibration data. Vibration monitoring on precision machine/equipment/instrument and also their surrounding floor condition to identify vibration magnitude/pattern that affects accuracy performance influencing production yield, scraps reduction and sharp-quality image capturing.</p>
	<p><b>Device Temperature</b></p> <p>This feature allows user to obtain the current device temperature.</p>
	<p><b>Commission Report</b></p> <p>Numerical and graphical data can be collected and stored in PC in the form of Commissioning Report files especially useful for accountability purpose and references as historical records for each machine/equipment installation, setup and preventive maintenance requirements. Multiple machines characteristics for levelling and vibration conditions can be stored and used for comparison in next planned preventive maintenance activity.</p>
	<p><b>DigiPas Website</b></p> <p>Direct user to DigiPas® Website for further detailed information.</p>
	<p><b>Help</b></p> <p>To open the Instruction Manual for the device and its Instruction manual.</p>
	<p><b>About</b></p> <p>This feature allows user to check the current PC Sync version and the firmware version of the device in sync.</p>

## CHAPTER 2: SYSTEM REQUIREMENTS

### **Recommended System Configuration:**

- \* At least 1 GB of RAM
- \* At least 50MB of free disk space available in your hard disk
- \* DVD-ROM
- \* USB Ports

Note: Software performance may vary depends on PC system configuration.

### **Recommended Operating System:**

- \* Windows XP with Service Pack 3
- \* Windows Vista
- \* Windows 7

**Digi-Pas<sup>®</sup> PC Sync** software can be configured in 32bit or 64 bit Microsoft Windows Operating Systems.

### **Required Third-Party Software:**

- \* Microsoft .Net Framework 3.5 for 32bit Windows Operating System
- \* Microsoft .Net Framework 4.0 for 64bit Windows Operating System
- \* Microsoft Excel 2007 or above
- \* Acrobat Reader

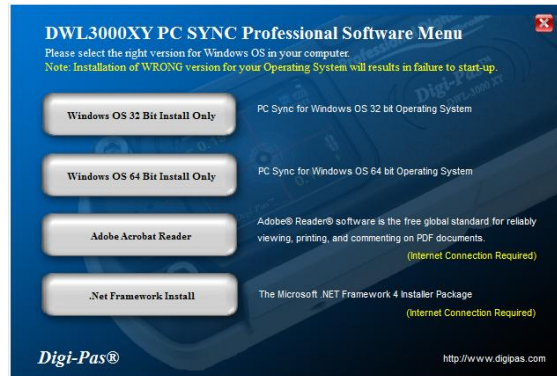
### **Note:**

Certain function of the software requires internet connection to operate.

# CHAPTER 3: GETTING STARTED

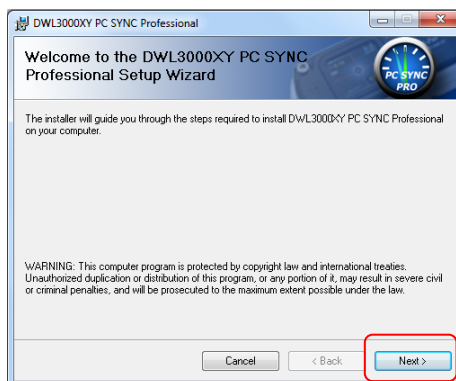
## Installation of DWL3000XY PC Sync

1. Insert DWL3000XY PC Sync DVD into your DVD drive. The following screen pops up automatically. Select the Adobe Acrobat Reader or .Net Framework button when your computer does not have the software. It needs internet connection to complete the installation. Next, click the PC Sync installation button according to your Window Operating System (32bit or 64 bit).



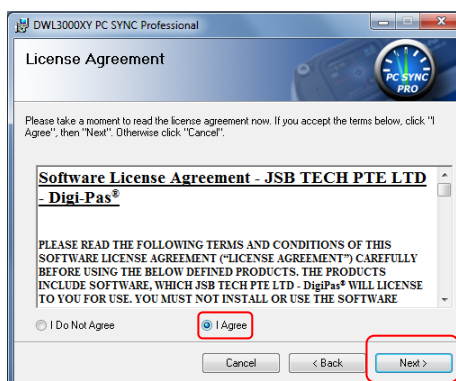
Installation Step 1

2. Welcome screen appears. Click " Next " to proceed the installation.



Installation Step 2

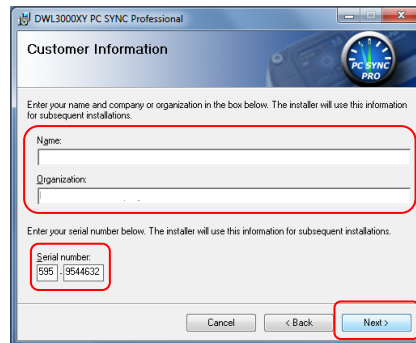
3. License Agreement screen appears. Click "I Agree" after reading through and accepting the agreement and then click " Next " to proceed the installation.



Installation Step 3

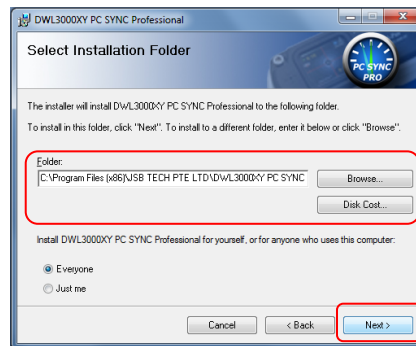


4. Customer Information screen appears. Enter your Name and Organization. Key in Device's **Serial Number** attached in the DVD box. Click "Next" to proceed the installation.



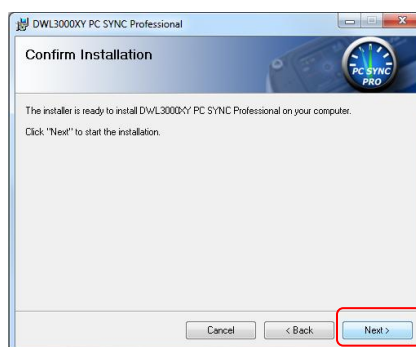
**Installation Step 4**

5. Installation folder screen appears. Use the installation folder as default unless you want to change the location. Click "Next" to proceed the installation.



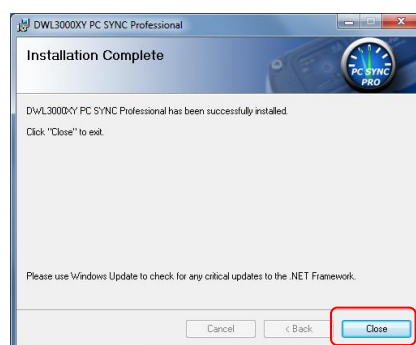
**Installation Step 5**

6. Confirm Installation screen appears. Click "Next" to proceed the installation.



**Installation Step 6**

7. Installation Complete screen appears. Click "Close" to complete the installation.



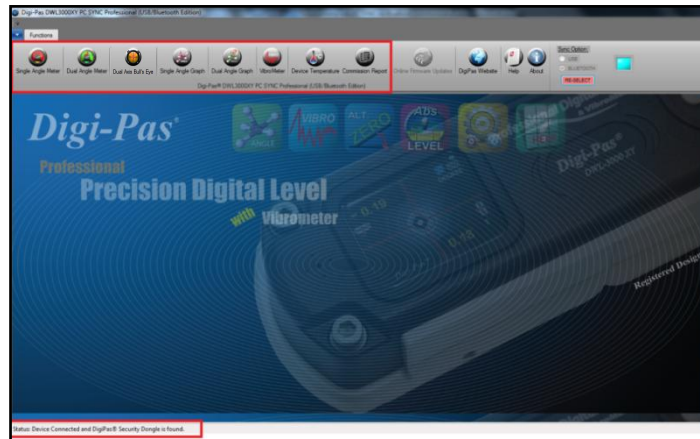
**Installation Step 7**



## Synchronization by Using USB Connectivity

### a). DWL3000XY Device

1. Double click the PC Sync icon on the desktop.
2. Connect DWL3000XY device with your computer via USB cable and insert the DigiPas® Security Dongle to the computer.
3. Select the Sync Option on PC screen with USB and click "SELECT" button.
4. All function toolbar buttons are then turned on and the status bar shows "Device Connected and DigiPas® Security Dongle is found". The DWL3000XY PC Sync is ready for use.



Interface of DWL3000XY PC Sync when it is ready to use

### b). DWL3000XY Bluetooth Device

Check the DWL3000XY Bluetooth device synchronization mode. By default, device setting is set to **USB mode**. To check or change the mode setting:



1. Press "MODE" button and select "PC SYNC" icon to access the Synchronization Setting page.



2. Select USB icon then press "Mode" button to activate it.  
Note: Status indicates the device is in USB or Bluetooth mode.

3. The device is required to turn OFF by pressing "ON/OFF" button and thereafter please turn ON the device again in order to activate the newly set **Synchronization mode**.

4. Double click the PC Sync icon on the desktop and connect DWL3000XY device with your computer via USB cable and insert the DigiPas® Security Dongle to the computer. Select the Sync Option with USB and click " SELECT" button. All function toolbar buttons are turned on and the status bar shows "Device Connected and DigiPas® Security Dongle is found". The DWL3000XY PC Sync is now ready for use.

## Synchronization by Using Bluetooth Connectivity

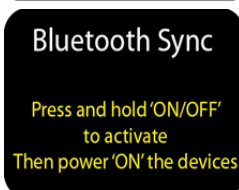
First, check the DWL3000XY Bluetooth device synchronization mode. By default, device setting is set to **USB mode**. To check or change the mode setting:



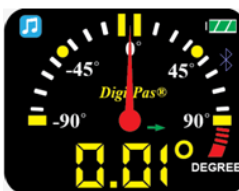
1. Press "MODE" button and select "PC SYNC" icon to access the Synchronization Setting page.



2. Select Bluetooth icon then press "Mode" button to activate it.  
Note: Status indicates the device is in USB or Bluetooth mode.

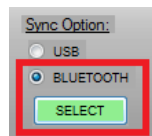


3. The device is required to turn OFF by pressing "ON/OFF" button and thereafter please turn ON the device again in order to activate the **Synchronization mode**.



4. Bluetooth logo appears on the device screen (at top-right corner). The device setting is now completed. User can proceed to synchronise the DWL3000XY device with the PC Sync software.

5. Activate your computer's Bluetooth and plug in the dongle to the USB port. Then, select the Sync Option with BLUETOOTH (i.e. located at top-right corner of your PC monitor) and click " SELECT" button.



6. "Discover Bluetooth Device" button is shown on PC monitor. Select the button to search for the DWL3000XYBluetooth device.



7. Bluetooth devices is shown at the drop down box. Select the device with the serial number indicated as shown on the drop down box and press "Connect to Bluetooth Device button" to establish the wireless connection.



8. When the connection is established successfully, all function toolbar buttons are turned on and the status bar shows "Device Connected and DigiPas® Security Dongle is found". The DWL3000XY PC Sync is now connected to the Device and ready for use.

# CHAPTER 4: FEATURES INTERFACE AND SETTING

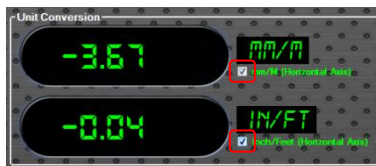


## Single Angle Meter



Blinking indicates measurement is in progress

### Unit Conversion:



Unit Conversion:  
Click the box to start the conversion.

### Features:

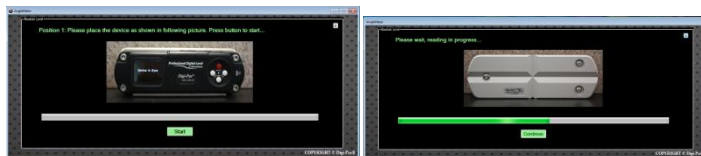


Alternate Zero

#### Alternate Zero:

Click the Alternate Zero button to start the feature. Reference angle appears and button blinks once activated.

Note: This feature only apply for software version 6.02 and above.



Instructions for Absolute Level

#### Absolute Level:

Click the Absolute Level button to start the feature. Follow the instructions shows on the screen. Absolute Level symbol appears and button blinks once activated.

Note: This feature only apply for software version 6.02 and above.



Absolute Level





Figure 10 displays two measurement systems side-by-side. The left system, labeled 'Horizontal Axis', shows two green digital readouts: -0.05 IN/FT and -4.19 mm/M. The right system, labeled 'Vertical Axis', shows two red digital readouts: 0.04 IN/FT and 2.97 mm/M. Both systems include a checkbox for 'Inch/Feet' and 'mm/M' units, which are checked in the image.

Digi-Pas DWL3000XY CNC SYNC Professional GUI (Bluetooth Edition) - [Dual Axis Meter]

Functions

Single Axis Meter | Dual Axis Meter | Dual Axis Bubble | Single Axis Graph | Dual Axis Graph | Worksheet | Device Temperature | Connection Report | Online Tempare Updates | DigiPas Tablets | Help | About

Device Status:   
 - ONLINE   
 - BLUETOOTH   
 - (RESTART)

Digi-Pas DWL3000XY CNC SYNC Professional GUI (Bluetooth Edition)

**Horizontal Axis**

0.00°

Altitude Zero

**Vertical Axis**

0.00°

Absolute Level

0.00 IN/FT ☐ IN/FT ☒ (Default Unit)

0.00 MM/M ☐ MM/M ☒ (Default Unit)

0.00 IN/FT ☐ IN/FT ☒ (Default Unit)

0.00 MM/M ☐ MM/M ☒ (Default Unit)

Status: Device Connected and DigiPas® Security: Example is found.

COPYRIGHT © Digi-Pas

© 2013 DIGIPAS USA LLC. All rights reserved.



## Dual Axis Bull's Eye

Measured Value  
(Vertical Axis)

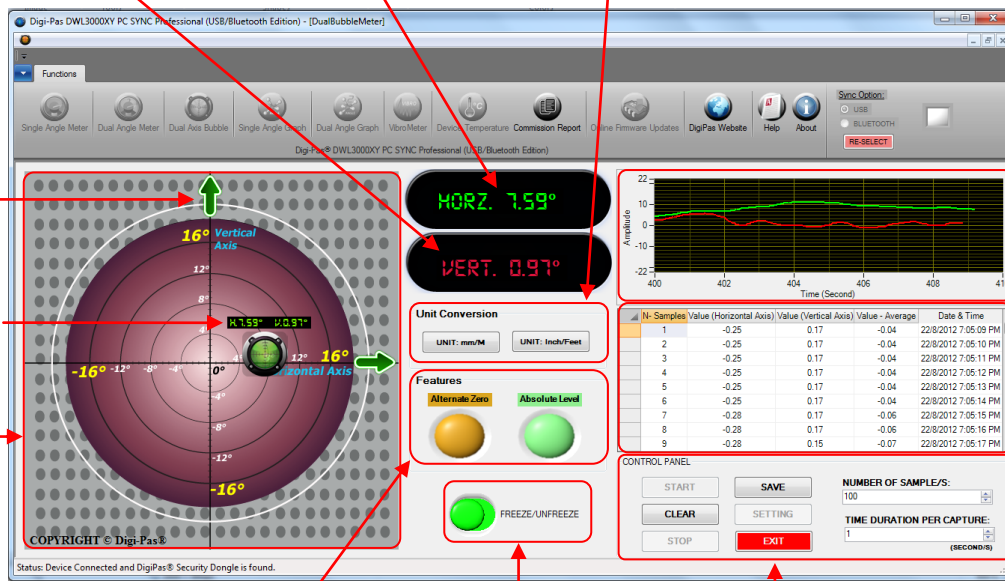
Measured Value  
(Horizontal Axis)

Unit Conversion

Higher Side

Measured Value:  
H. : Horizontal Axis  
V. : Vertical Axis

Bubble Meter



Angle Graph

Recorded Data

Features

Freeze or Unfreeze  
the measurement

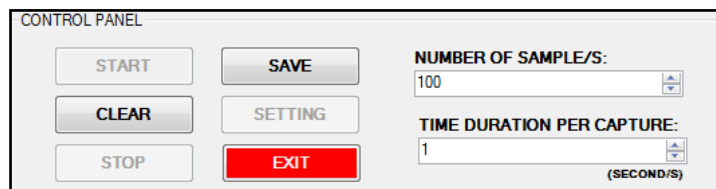
Data Logging  
Control Panel

### Unit Conversion:



Click the unit conversion button to change to other units  
(degree, mm/M, In/Ft).

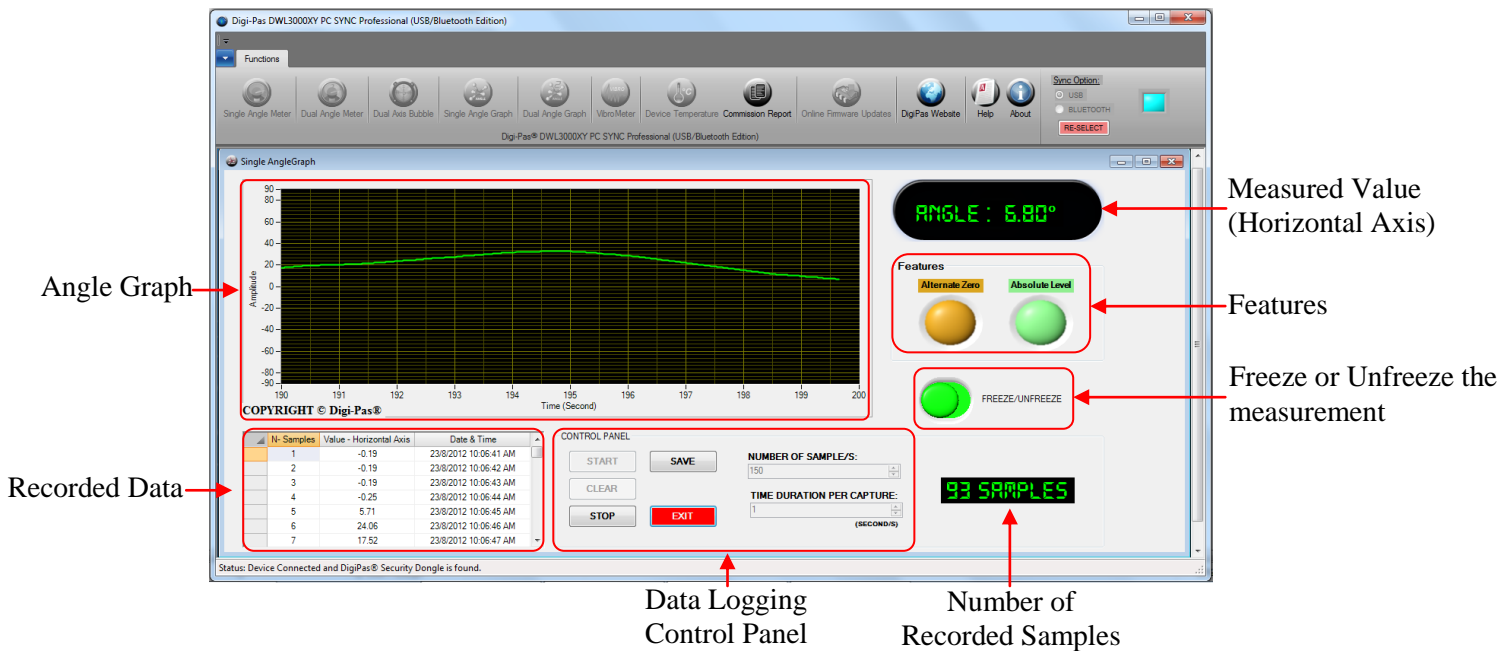
### Data Logging Control Panel:



To start data logging, select the number of samples by pressing the up down arrow. Next, select the time duration per capture accordingly. Click START button to initiate data logging. Click STOP button to halt data logging and click CLEAR button to erase or click SAVE button to store the data. The SETTING button can be used to configure the row visibility window of the recorded data. EXIT button is used to quit the Dual Axis Bubble window.



# Single Angle Graph

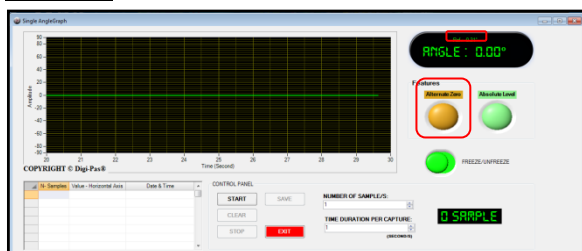


## Data Logging Control Panel:

The 'CONTROL PANEL' is a sub-window containing several buttons and input fields. It includes a 'START' button, a 'SAVE' button, a 'CLEAR' button, a 'STOP' button, and a red 'EXIT' button. To the right of these buttons, there are two input fields: 'NUMBER OF SAMPLE/S:' with a value of 100 and 'TIME DURATION PER CAPTURE:' with a value of 1 second. The 'EXIT' button is highlighted in red.

To start the data logging, select the number of samples by pressing the up down arrow. Next, select the time duration per capture according. Click START button to initiate data logging. Click STOP button to halt data logging and click CLEAR button to erase or click SAVE button to store the data. EXIT button is used for quit Single Angle Graph window.

## Features:



### Alternate Zero:

Click the Alternate Zero button to start the feature. Reference angle appears and button blinks once activated.

Note: This feature only apply for software version 6.02 and above.



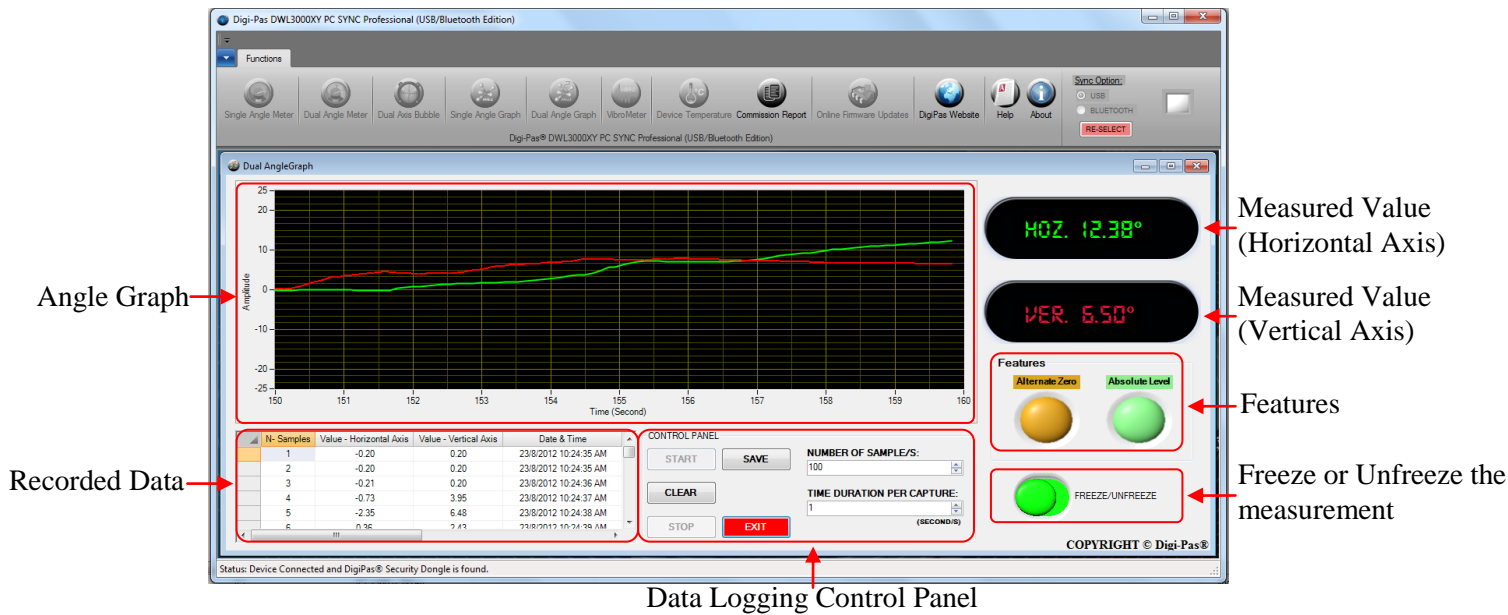
### Absolute Level:

Click the Absolute Level button to start the feature. Follow the instructions shows on the screen. Absolute Level symbol appears and button blinks once activated.

Note: This feature only apply for software version 6.02 and above.



# Dual Angle Graph



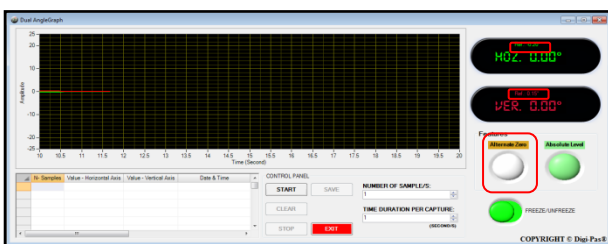
## Data Logging Control Panel:

The Data Logging Control Panel includes the following controls:

- START** button
- SAVE** button
- CLEAR** button
- STOP** button
- EXIT** button
- NUMBER OF SAMPLE/S:** Set to 100
- TIME DURATION PER CAPTURE:** Set to 1 (SECOND/S)

To start data logging, select the number of samples by pressing the up down arrow. Next, select the time duration per capture accordingly. Click **START** button to initiate data logging. Click **STOP** button to halt data logging and click **CLEAR** button to erase or click **SAVE** button to store the data. **EXIT** button is used to quit Dual Angle Graph window.

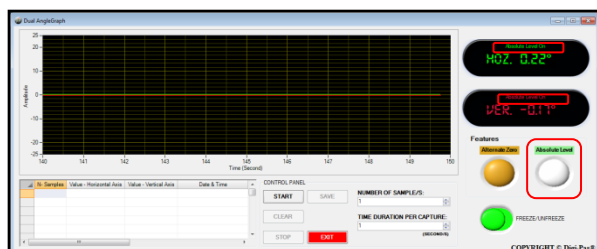
## Features:



### Alternate Zero:

Click the Alternate Zero button to start the feature. Reference angle appears and button blinks once activated.

Note: This feature only apply for software version 6.02 and above.

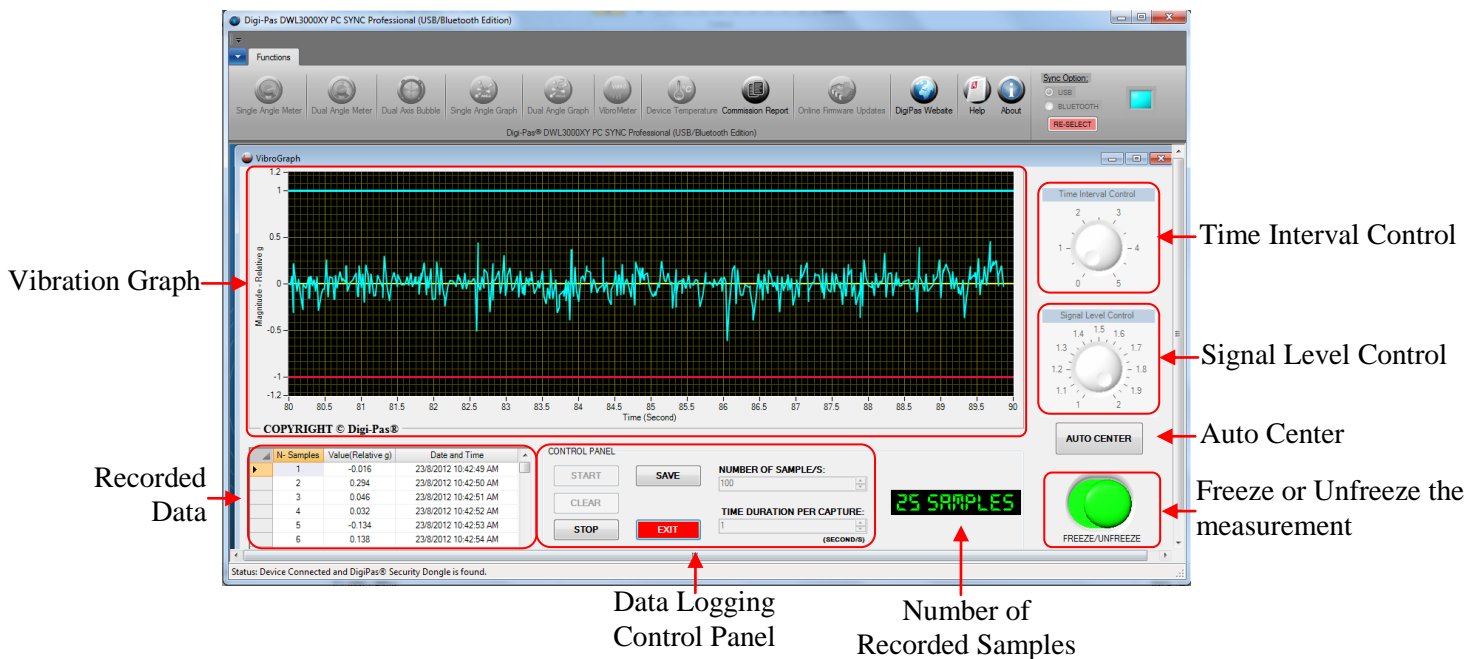


### Absolute Level:

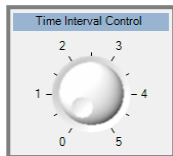
Click the Absolute Level button to start the feature. Follow the instructions shows on the screen. Absolute Level symbol appears and button blinks once activated.

Note: This feature only apply for software version 6.02 and above.



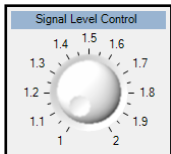


### Time Interval Control



To adjust the time interval (Horizontal Scale) for the vibration graph.  
 Scale 0: 10 seconds (default)  
 Scale 5: 5 seconds

### Signal Level Control



To amplify the measured magnitude of vibration.  
 Scale 1: Original measured vibration value  
 Scale 2: Double the measured vibration value

### Auto Center

To auto adjust the vertical scale of the graph and set the zero relative gravity at the center of the graph.

### Data Logging Control Panel:



To start data logging, select the number of samples by pressing the up down arrow. Next, select the time duration per capture accordingly. Click START button to initiate data logging. Click STOP button to halt data logging and click CLEAR button to erase or click SAVE button to store the data. The SETTING button can be used to configure the row visibility window of the recorded data. EXIT button is used to quit VibroMeter window.